## Isopropylated Triphenyl Phosphate - Comments of Environmental Defense

(Submitted via Internet 4/25/02)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Isopropylated triphenyl phosphate CASRN 68937-41-7.

Isopropylated triphenyl phosphate is a very high production volume chemical, approximately 20 to 30 million pounds per year. It is also known by commercial names as Durad 110 hydraulic fluid and Kronitex 50 triaryl phosphate and is used as a flame-retardant hydraulic fluid and a plasticizer.

Due to the fact that this chemical is a polymer, the physical/chemical characteristics of Propylated Triphenyl Phosphate are not readily determined (with the exception of water solubility), are not available and will not be required. Data on environmental fate, with the exception of toxicity to fish and aquatic invertebrates are lacking; we concur with the sponsor's decision to develop such data.

We are, however, concerned about the sponsor's decision not to perform a repeat-dose study. Although this study appears to have been well designed, the loss of animals, 15% in 28 days, apparently due to causes other than toxicity, indicates poor animal care. This degree of animal loss would not be considered acceptable in a modern study. Also, results reported here state that liver-to-body weight ratios were increased in all dose groups. Description of study results does not address the magnitude of these changes or state if these changes were dose related. Such data are vital to interpretation of this study and should be included. If such data are not available an additional repeat dose study should be required.

Additional comments regarding this report are as follows.

- 1. Section 1.13: It is stated in this section that an acceptable method of disposal is incineration. Given the fact that this chemical has flame retardant properties, it would seem prudent to provide more extensive conditions under which it could be safely incinerated. That is, the temperature required to completely incinerate this chemical should be sufficiently high to assure combustion without appreciable volatilization of unburned material. This would probably require more stringent incineration conditions than might be routinely required and this fact should be made clear.
- 2. Section 5.2.1: The first study reported fails to list the strain or sex of animals used or the dose administered. It was not conducted under GLP and should probably be considered invalid. Even if it is considered appropriate to list this study to show that it was not overlooked, the sponsors should make clear that they are not relying on this information.
- 3. Section 5.5: Results of a study of genotoxicity using the Ames test are reported to have been negative. It is not reported if isopropylated triphenyl phosphate, like some other trisaryl phosphates, is toxic to bacteria at the doses studied. General toxicity would, of course, negate any genotoxicity.
- 4. Section 5.10: It is not stated if either of the neurotoxicity studies were conducted under GLP. This information should be provided for completeness even though neurotoxicity is not a SIDS endpoint.

In summary, isopropylated triphenyl phosphate is produced in high volumes and widely used in commercial applications. Even though this chemical apparently has low toxicity and would probably not persist in the environment, data to confirm this are lacking. Accordingly, additional testing is needed as indicated above.

Thank you for this opportunity to comment.

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